speaQ™
user manual
for Windows Mobile 5 Pocket PC

Quick start to get going

To start making phone calls using speaQ for Windows Mobile, you need:

- A Windows Mobile 5 Edition based PDA or smartphone (300+ Mhz processor) with WiFi capability.
- SIP account from a SIP supporting VoIP service provider. The SIP account consists of a User ID, Password, SIP Server address and a phone number for incoming calls. If you do not have an account, please visit www.broadvoice.com or other Internet Phone account provider and subscribe to a softphone account.
- WiFi Internet connection. You need to be in range and your device needs to be connected. Make sure the connection is not behind a firewall. If so please activate Stun (see page 10 of manual for details).
- We recommend using a pair of headphones to avoid echo in conversations.

First time setup

Step 1:
Connect your device to a PC using the data synch cradle. Load the speaQ installer file into your device using Microsoft ActiveSync and install it (see page 3 of manual for details).

Step 2:
Open speaQ. Go to *Menu > Server Configuration* and enter your SIP account details. Save and return to dialpad. Once speaQ displays "*Registered*", you are ready to call (see pages 7-8 of manual for details).

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Introduction

Voice over Internet Protocol (commonly referred to as VoIP) is a method for making telephone calls over the Internet. Why VoIP? It costs less than standard telephone calls. The traditional Public Switched Telephone Network (PSTN) is a robust system, but can be expensive, especially for international calls. VoIP allows you to make phone calls, international in particular, over the Internet at a much lower price than the traditional telephone networks.

Overview

speaQ is a VoIP based telephony software that connect users of wireless Internet enabled handheld and smartphone devices. It is built around the Session Initiation Protocol (SIP). Making calls with speaQ is easy. Just install and configure it with a VoIP account on your portable Windows Mobile device and you are ready to call any PSTN line or mobile phone around the world!

System requirements

speaQ is only supported on Windows Mobile 5.0 PDA edition. Windows Mobile 5.0 Smartphone edition is not supported. speaQ release for Windows Mobile was tested on a HP iPAQ hx2459 with an Intel PXA270 520Mhz Processor (speaQ runs on any processor above 300 Mhz), 64 MB RAM, 192 MB ROM, integrated WiFi (802.11b) with Windows Mobile 5.0 PDA edition. speaQ requires a minimum uplink/downlink bandwidth of 80 kbps for best audio quality.

How it works

SIP[1] is a standard for conducting telephone calls and multimedia sessions with one or more participants over the web. To make calls with speaQ, you need an account from a SIP based VoIP Service Provider. Commercial services such as Broadvoice™ and Teliax™ provide the ability to call PSTN phones over the Internet for a small monthly fee. Other services such as freeworlddialup provide free calling over to other Internet based SIP account users.

Getting an account

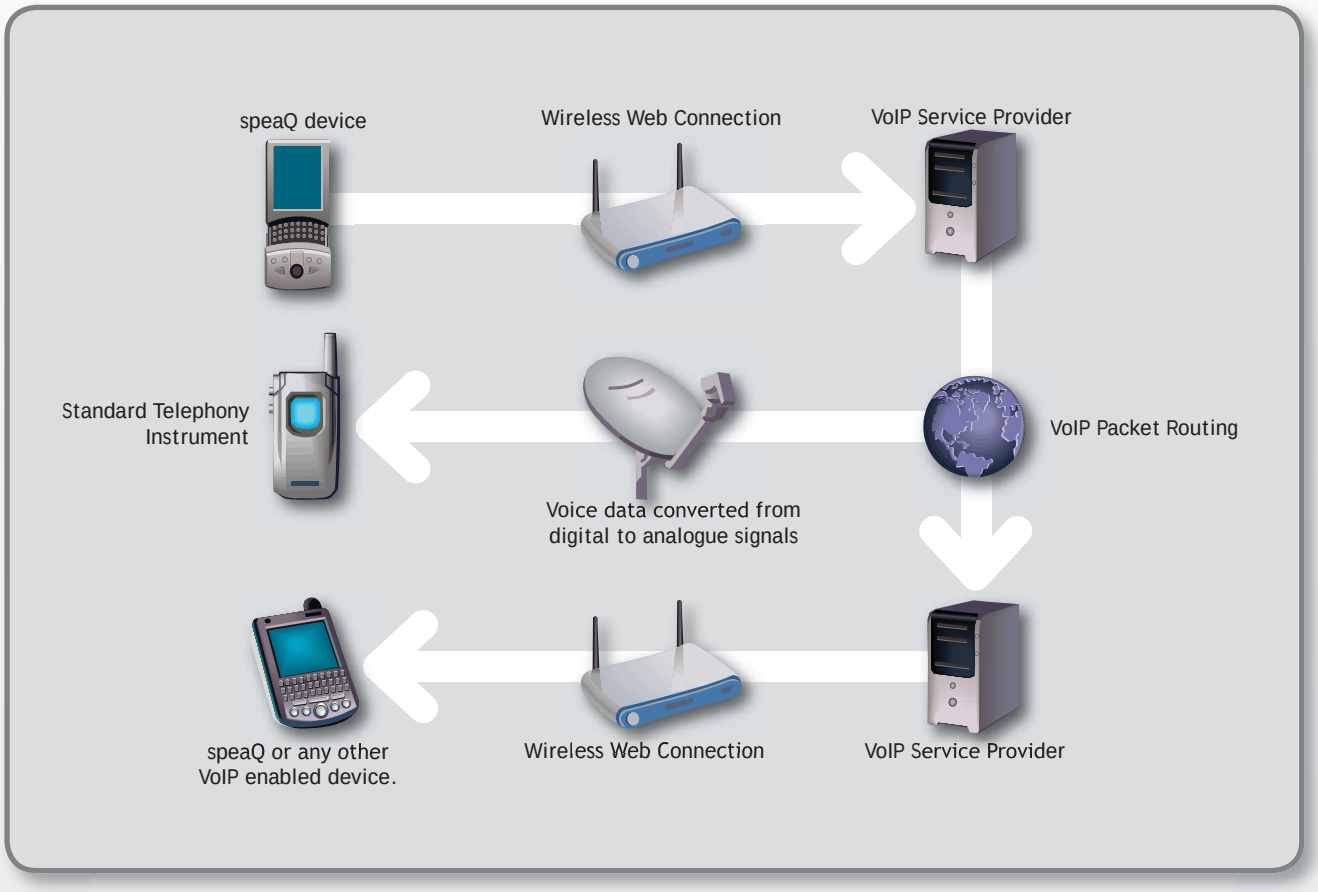
SIP has become a widely popular standard for VoIP since its acceptance as a signaling protocol over half a decade ago. www.sipcenter.com lists over 228 VoIP service providers[2] across the globe that support the SIP standard. So, getting a SIP account is easy wherever you are. Pick a plan which suits your needs from a preferred service provider and start calling.

BroadVoice™ and Teliax™ are some U.S.A based networks that have become popular over the past few years, and which we have tested with speaQ.

1. Signup for a SIP account.
2. Configure speaQ with SIP account details.
3. Start calling.

The SIP account details consist of your account user name (may differ from the number assigned to your account for incoming calls), password and SIP server address.

How it works



1. To learn about the SIP standard see www.sipknowledge.com and SIP Working Group.

2. See www.voipproviderslist.com for a directory listing of more than 2000 VoIP service providers around the world. Note: Not all may support the SIP standard.

Installing speaQ

Step 1:
Make sure that you have Microsoft Active Sync installed on your computer. Connect your Windows Mobile 5 PDA Edition-based PDA or smartphone with WiFi or EVDO capability to your PC using the data sync cradle. Wait until the synchronization process is complete.

Step 2:
Once done, click on the *Explore* button in Microsoft ActiveSync.

Step 3:
Drag the *speaq.CAB* installation file into the *Explore* window. Wait until the file is completely transferred.

Step 4:
Open the *My Documents* folder in your device. Scroll and select the *speaq.CAB* installation file. (*Figure 1-2)*

Step 5:
Wait until the installation is complete. You will see a confirmation message when done. Tap the *OK* button. (*Figure 3-4)*

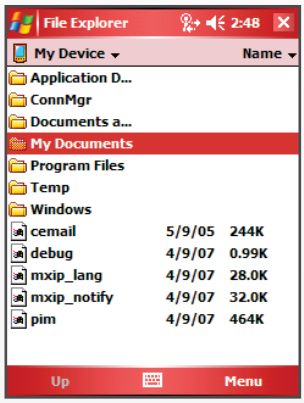


Figure 1

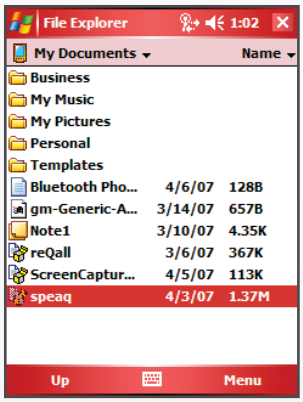
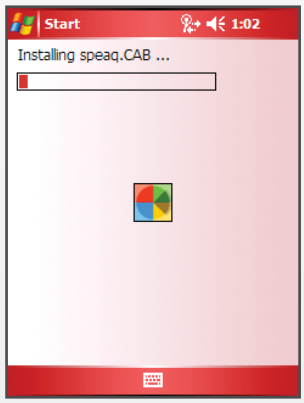


Figure 2



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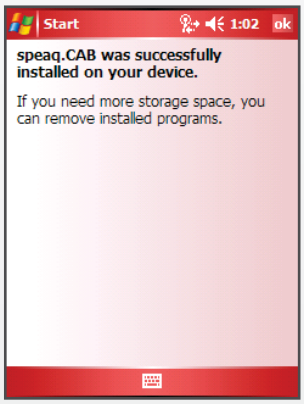

Start 1:02 ok
speaq.CAB was successfully installed on your device.
If you need more storage space, you can remove installed programs.

Figure 4

Starting speaQ

Step 1:
speaQ requires your device to be connected to the Internet (e.g. via an open WiFi Hotspot). Open the *Program Files > speaQ* folder. Select the speaQ application. *(Figure 5)*

Step 2:
speaQ will attempt to register your device with the default VoIP service provider. If registration is successful, you will see a message. *(Figure 6)*

There can be a number of reasons for Registration failure, particularly if this is the first time you have attempted to register with speaQ. Make sure your device is connected to the internet on the appropriate WiFi network, and that you have correctly entered your user credentials. Further information on troubleshooting can be found on page 11.

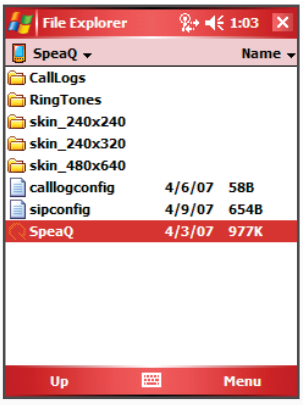


Figure 5

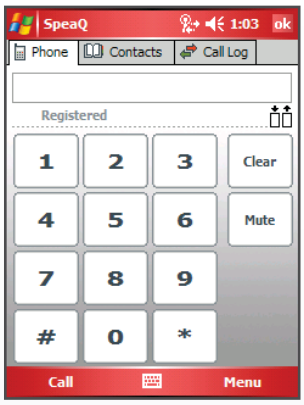


Figure 6

Figure 7

Quick reference

1. Phone Dialpad Tab
2. Display Screen
3. speaQ Status
4. Dial Pad
5. Contacts Tab
6. Web Connectivity
7. Volume Control
8. Close Button
9. Call Log Tab
10. Call Quality (Packet Loss)
11. Clear Button
12. Mute Button
13. Call Button
14. Menu Button

Configuration/Registration

Step 1:

While on the *Phone* tab [Phone], tap the *Menu* button [Menu] and select *Server Configuration*. *(Figure 8)*

Step 2:

Enter the *User ID*, *Password* and *SIP Server* account details. *If you have one, an out bound proxy server can also be specified, but this is optional. (Figure 9)*

Step 3:

Tap the *Apply* button to register with the *SIP server*. On successful registration you will get a *"Register OK."* message and the registration details will be saved. *(Figure 10)*

speaQ will remember multiple accounts if you add them to the list. To select a previously entered account use the pull down menu as shown. *(Figure 11)*

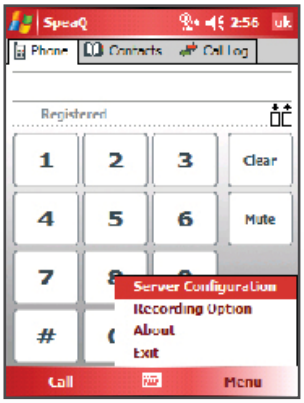


Figure 8

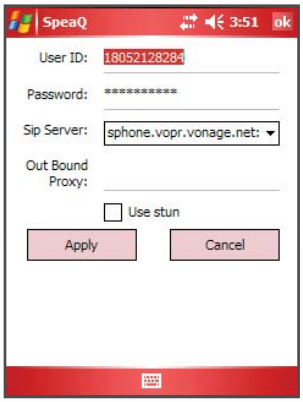


Figure 9

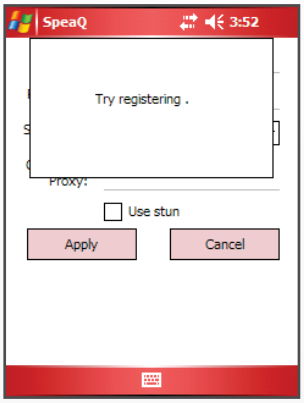


Figure 10

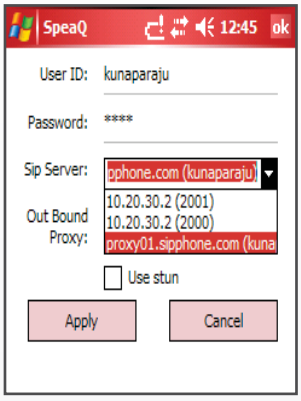


Figure 11

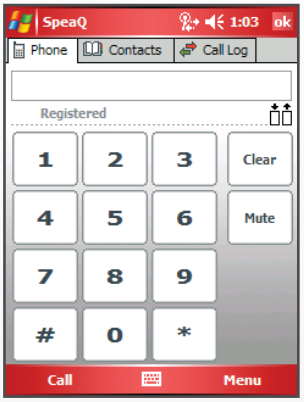
Making calls

Step 1:
If the speaQ status displays "*Registered*" then you are ready to make calls. Dial a number tap the *Call* button Call . If you made an error while entering the number, use the *Clear* button Clear to correct. *(Figure 12)*

Step 2:
"*Outgoing call... <number>*" will appear momentarily as you hear the dial tone. Wait for the call to connect and start speaking. *(Figure 13)*

Step 3:
If you would like to Mute the microphone, tap on the *Mute* button Mute . Tap on it again to activate the microphone again.

Step 4:
When the call connects, the *Call* button Call is replaced by the *End* button. After you finish talking, tap the *End* button to hang up. speaQ will display "*Call ended*". *(Figure 14)*



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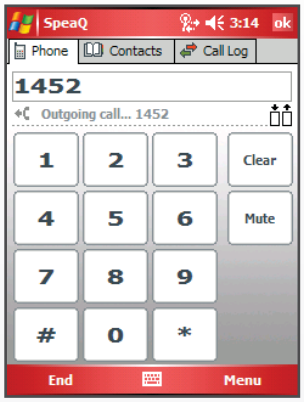

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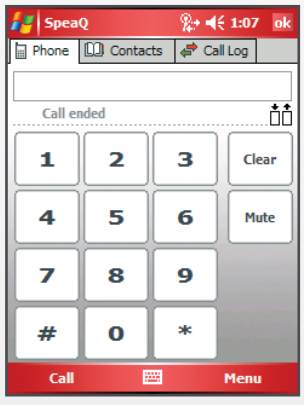


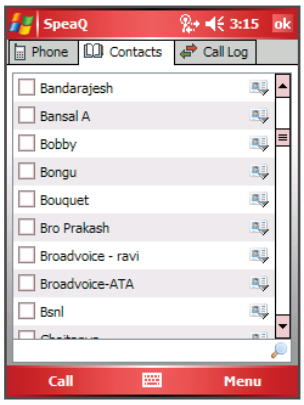
Figure 14

Calling contacts

Step 1:
Tap on the *Contacts* tab Contacts to view all existing contacts. *(Figure 15)*

Step 2:
Scroll or text search and select the name of the person you wish to call. Tap the *Call* button Call . *(Figure 16)*

If you wish to bulk check, uncheck, delete or view details of contacts in the list, tap on the *Menu* button Menu while on the *Contacts* tab Contacts . *(Figure 17)*



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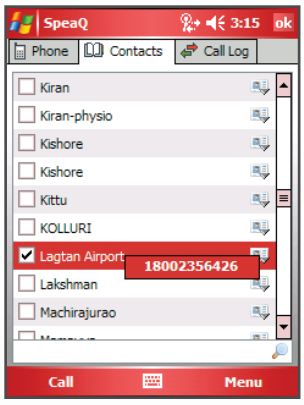

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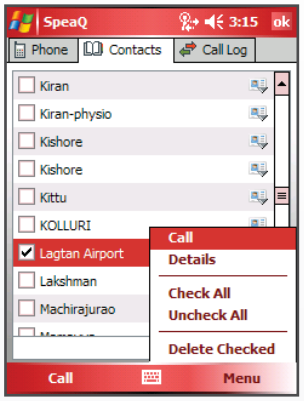


Figure 17

Recording Phone Calls

The record feature allows you to make recordings of your phone calls on the local device. These recordings can be stored in the main memory for the PDA/Smartphone or on a storage card attached to the device. Recordings are stored in .wav format, and can be replayed on the device, or transferred to a PC.

To enable call recording:

Step 1:
While on the *Phone* tab [Phone], tap the *Menu* button [Menu] and select *Recording Option* option. *(Figure 18)*

Step 2:
Tap the *No Recording* option if you do not wish to record your conversations or the *Onboard Storage* option if you wish to do so. The default option is not to record. *(Figure 19)*

The *Path* option allows you to choose where to save your recording. *(Figure 20)*

Step 3:
Once you have made your selection you can click *Apply* tab to 'confirm and save' or *cancel* to exit or close settiongs.

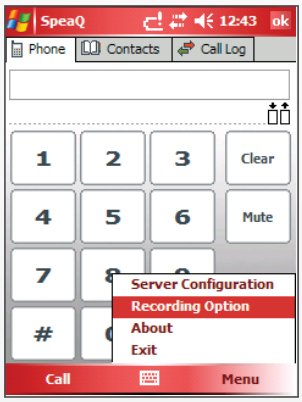
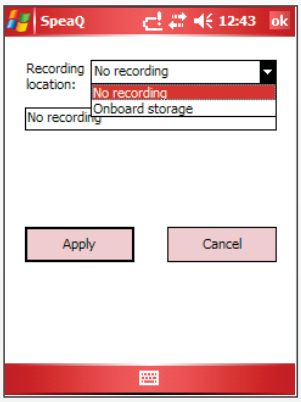


Figure 18



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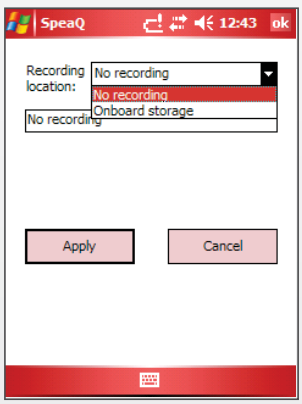


Figure 20

Using call log

The Call Log feature allows you to monitor incoming and outgoing calls from speaQ.

Step 1:

Tap the *Call Log* tab Call Log to view incoming, outgoing and missed call activity. *(Figure 21)*

Step 2:

Tap on the *Menu* button Menu while on the Call Log tab to call, delete or save the logged number. Select *Options...* to amend Call Log settings. *(Figure 22)*

Step 3:

Check the *Maintain Call Log* box to activate the feature. Specify the number of days you wish to maintain the logged numbers (enter a numeric value between 1 and 60 in the field). Tap the *OK* button. *(Figure 23)*

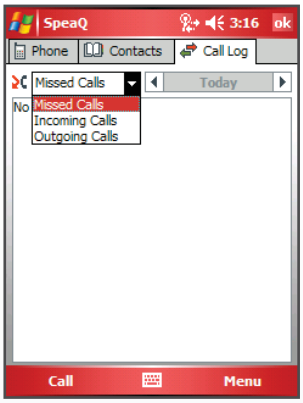
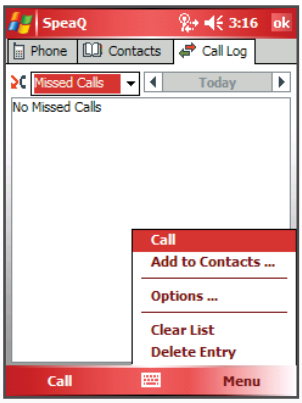


Figure 21



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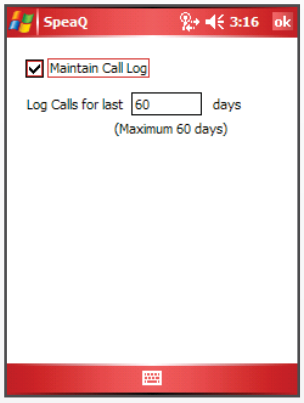

Figure 23

Using stun

Stun allows speaQ to work through certain firewall enabled Internet connections.

When Stun is activated, speaQ sends a request to a dedicated remote Stun server for the public IP address of the NAT (Network Address Translation) router. Once this information is registered with your SIP account server by speaQ, you are ready to make calls. Sounds complicated? Don't worry, it's much easier in practice. Follow the steps below to activate the feature.

Step 1:
While on the *Phone* tab [Phone], tap the *Menu* button [Menu] and select *Server Configuration*. Check the Stun box to activate the feature. *(Figure 24)*

Step 2:
Tap the *Test Registration* button if you wish to verify the connectivity and registration status. Tap the *OK* button. *(Figure 25)*

Step 3:
If the speaQ status displays "*Registered*" then you are ready to make calls.
(Figure 26)

Note: We recommend using stun only when registration fails with the default settings. Registration could fail for other reasons too. Please see the troubleshooting section for more information.

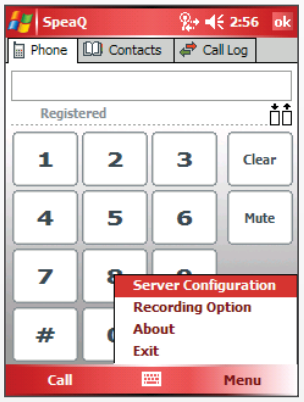

Figure 24

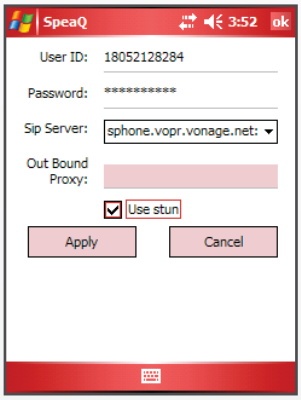

Figure 25

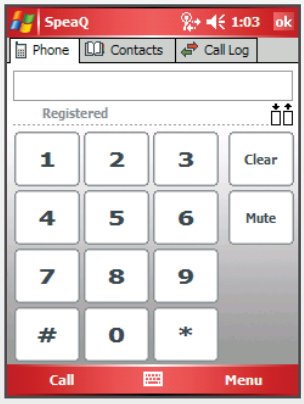

Figure 26

Troubleshooting

Problems	Solutions
Registration fails.	• Ensure you are connected to the Internet. If you are connecting to the Internet through a WiFi Hotspot, check that your device is in range. Check signal strength. • Ensure your SIP account details are entered correctly. Please see the configuration section. • Ensure your device is issued an IP address by the ISP. • Ensure that the Internet is not behind a firewall. If so, enable the stun feature and try registering again.
speaQ stops registering even when WiFi connection is present	As a last resort, please try resetting the device. We have occasionally seen issues with Windows Mobile WIFI that were resolved on device reset.
Call audio keeps breaking.	Make sure you have enough bandwidth. speaQ requires a minimum of 80 kbps up/ downlink. You can check the current bandwidth available to your device at www.dslreports.com/msp For international calls some latency, and occasional poor quality should be expected, due to the physical distance of the call, and the possibility of satellite connections being used. Problems on long distance calls may also be experienced during Internet Peak traffic periods (roughly the USA working day).
Call audio is noisy.	Noisiness is a device specific issue. Please see your device manual to adjust volume and activate automatic gain settings. We strongly recommend using a pair of headphones.
speaQ stops responding all of a sudden.	Please check that your Internet connection is still active.
speaQ does not open.	Please make sure that you have installed the application properly. Check our website for bug fixes and updates. Try uninstalling and re-installing it.

Support/Helpline

- If you have any questions regarding this product, e-mail our technical support at

  support@qtechinc.com

- For software updates, fixes, knowledge base, please visit:

  www.qtechinc.com/speaq.htm

- If you like to report a bug or discuss speaQ related issues, please visit:

  www.qtechinc.com/speaq_support.htm